

Do Not Take From This Room

Handbook of Industrial Surfactants

Third Edition
Volume 1

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Synapse Information Resources, Inc.

EXHIBIT A

Chem. Descrip.: PEG-50 tallowamine
Ionic Nature: Cationic
CAS 61791-44-4

Uses: Coemulsifier, leveling agent for the different
dyeing of nylon
Properties: Yel. solid; water-sol.; HLB 17.5; 100%
conc.

Rhodameene® VP-532/SPB [Rhodia HPCII]
Chem. Descrip.: PEG-8 hydrogenated tallowamine

Ionic Nature: Nonionic/cationic
CAS 61791-26-2

Uses: Wetting agent, penetrant, emulsifier, stabilizer,
antistat, and lubricant; retarder, antiprecipitant;
levelling agent in dyeing; dispersant for fiber-glass matting.
Properties: Liq.; HLB 15.0; 20% act.

Rhodamox® C [Rhodia HPCII]
Chem. Descrip.: Cocamine oxide

Ionic Nature: Nonionic
CAS 61788-90-7; EINECS/ELINCS 263-016-9
Uses: Basic foamer and viscosifier in hard water
Properties: Liq.; 30% conc.

Rhodamox® CAPO [Rhodia HPCII]
Chem. Descrip.: Cocamidopropyl dimethylamine

oxide
Ionic Nature: Nonionic/cationic
CAS 68155-09-9; EINECS/ELINCS 268-938-5
Uses: Foaming agent/stabilizer, thickener, emollient
for shampoos, bath prods., dishwash, rug
shampoos, fine fabric detergents, shaving creams,
lotions, foam rubber, electroplating, paper coatings
used in toiletries for mildness

Properties: Colorless clear liq.; faint odor; water
sol.; disp. in min. oil; dens. 1.0 g/ml; f.p. < 0 C;
30% conc.

Rhodamox® LO [Rhodia HPCII]
Chem. Descrip.: Lauryl dimethylamine oxide

Ionic Nature: Nonionic/cationic
CAS 1643-20-5; EINECS/ELINCS 216-700-6
Uses: Foaming agent/stabilizer, thickener, deter-
gent, wetting agent, antistat, emollient for shampoos, bath prods., dishwash, fine fabric deter-
gents, shaving creams, lotions, textile softeners;
used in toiletries for mildness; foam stabilizer in
foam rubber, electroplating, paper coatings

Properties: Colorless clear liq.; faint char. odor;
sol. in water, alcohols; disp. in nonpolar org. solvs.,
e.g. kerosene, min. oils; dens. 1.0 g/ml; f.p. < 0 C;
30% act.

Rhodamox® SO [Rhodia HPCII]
Chem. Descrip.: Stearamidopropylamine oxide

Ionic Nature: Nonionic
CAS 25066-20-0; EINECS/ELINCS 246-598-9
Uses: Foamer, viscosifier, emollient, conditioner;
hydrogen peroxide stabilizer in bleaching formu-
lations; cold waves
Properties: Paste; 30% conc.

Rhodapex® AB-20 [Rhodia HPCII]
Chem. Descrip.: Ammonium laureth sulfate

Ionic Nature: Anionic
CAS 32612-48-9
Uses: Emulsifier for emulsion polymerization and
min. oils; detergent
Properties: Liq.; 30% conc.

Rhodapex® CD-128 [Rhodia HPCII; Rhodia HPCII
France]
Chem. Descrip.: Ammonium capryleth sulfate

Ionic Nature: Anionic
CAS 68891-29-2
Uses: High foaming emulsifier, wetting agent, dis-
persant for aq. high electrolyte systems, built de-
tergents; air-entraining agent, foamer, frothing agent
for concrete, cement, gypsum wallboard; solubi-
lizer; wetting agent for crop protection formula-
tions

Regulatory: Exempt from tolerance under EPA
40CFR §180.1001(c)(e)

Properties: Straw liq.; good sol. in electrolyte sys-
tems; sp.gr. 1.056; pour pt. -5 C; 58% act.

Rhodapex® CO-433 [Rhodia HPCII]

Chem. Descrip.: Sodium nonoxynol-4 sulfate
Ionic Nature: Anionic
CAS 68891-39-4

Uses: High foaming detergent, wetting agent, dis-
persant for dishwashing, scrub soaps, car washes,
rug and hair shampoos; emulsifier for emulsion
polymerization, petrol. waxes; antistat for plas-
tics and syn. fibers; lime soap dispersant
Regulatory: FDA compliance

Properties: Varnish 4 max. clear liq.; mild aromatic
odor; water-sol.; sp.gr. 1.065; dens. 8.9 lb/gal;
visc. 2500 cps; surf. tens. 32 dynes/cm (1%);
28% act.

Rhodapex® CO-436 [Rhodia HPCII; Rhodia HPCII
France]
Chem. Descrip.: Ammonium nonoxynol-4 sulfate

Ionic Nature: Anionic
CAS 9051-57-4
Uses: High foaming detergent, wetting agent, dis-
persant for dishwashing, scrub soaps, car washes,
rug and hair shampoos; emulsifier for emulsion
polymerization, petrol. waxes; antistat for plas-
tics and syn. fibers; lime soap dispersant; crop
protection formulations

Regulatory: FDA compliance; exempt from toler-
ance under EPA 40CFR §180.1001(c)(e)

Properties: Varnish 5 max. clear liq.; alcoholic
odor; water-sol.; sp.gr. 1.065; dens. 8.9 lb/gal;
visc. 100 cps; surf. tens. 34 dynes/cm (1%);
58% act.

Rhodapex® EA [Rhodia HPCII]
Chem. Descrip.: Ammonium laureth (3) sulfate

Ionic Nature: Anionic
CAS 32612-48-9
Uses: High foaming emulsifier for industrial, institu-
tional and household cleaners; generates stable
foam consisting of densely packed bubbles; pro-
duces luxurious feel in cosmetics, toiletries, phar-
maceuticals; exc. wetting; rec. for clear liq. shamp-
oos where low eye irritation is important; bubble
bath, children's prods., antiseptic creams, contra-
ceptive foams, diaper rash preventatives, deodor-
ant preps.

Properties: Liq.; visc. 300 cps; cloud pt. -5 C; pH
6.7 (10%); 27% act.

Rhodapex® EA-2 [Rhodia HPCII; Rhodia Canada]
Chem. Descrip.: Ammonium laureth sulfate

Ionic Nature: Anionic
CAS 67762-19-0
Uses: Detergent used in personal care prods.

Properties: Liq.; 26% conc.

Rhodapex® EAY [Rhodia HPCII; Costec]
Chem. Descrip.: Ammonium laureth sulfate

Ionic Nature: Anionic
CAS 67762-19-0
Uses: Foaming agent, detergent, emulsifier for
shampoos, bubble baths, liq. soaps; exc. wet-
ting; rec. for clear liq. shampoos where low eye
irritation is important; bubble bath, children's prods.,
antiseptic creams, contraceptive foams, diaper
rash preventatives, deodorant preps.

Properties: Thixotropic liq.; cloud pt. 0 C; pH 6.7
(10%); 26% act.

Rhodapex® ES [Rhodia HPCII; Costec]
Chem. Descrip.: Sodium laureth (3) sulfate

Ionic Nature: Anionic
CAS 9004-82-4; EINECS/ELINCS 221-416-0
Uses: Emulsifier, high foaming base for shamp-
oos, It. duty detergents, bubble baths; polymer-
ization surfactant

Properties: Liq.; 27% conc.

Rhodapex® ES-2 [Rhodia HPCII]
Chem. Descrip.: Sodium laureth (2) sulfate

Ionic Nature: Anionic
CAS 68585-34-2; EINECS/ELINCS 221-416-0
Uses: Detergent for shampoos, bubble baths

Properties: Liq.; 26% act.

Rhodapex® ES-12 [Rhodia HPCII; Costec]
Chem. Descrip.: Sodium laureth sulfate (12 EO)

Ionic Nature: Anionic

CAS 9004-82-4; EINECS/ELINCS 221-416-0
Uses: Surfactant for personal care prods.

Properties: Liq.; 60% act.

Rhodapex® EST-30 [Rhodia HPCII; Rhodia HPCII
France; Costec]

Chem. Descrip.: Sodium trideceth sulfate

Ionic Nature: Anionic
CAS 25446-78-0; EINECS/ELINCS 246-985-2
Uses: Emulsifier, wetting agent, dispersant for baby
shampoo, other personal care prods., household,
institutional and industrial formulations, emulsion
polymerization of styrene systems, textile
scouring, dishwash

Regulatory: FDA compliance

Properties: Gardner 2 max. liq.; cloud pt. 14 C
max.; pH 7.5-8.5 (10%); surf. tens. 33 dynes/cm
(@ CMC); 29-30% act.

Rhodapex® ESY [Rhodia HPCII; Rhodia HPCII
France; Costec]

Chem. Descrip.: Sodium laureth (1) sulfate

Ionic Nature: Anionic
CAS 68585-34-2; EINECS/ELINCS 221-416-0
Uses: Base, cosurfactant, emulsifier for shampoos,
It. duty detergents

Properties: Liq.; 30% conc.

Rhodapex® MA360 [Rhodia HPCII]
Chem. Descrip.: Ammonium laureth (3) sulfate

Ionic Nature: Anionic
CAS 67762-19-0
Uses: High active base for It. duty dish and fine
fabric cleaners at neutral pH; emulsifier

Properties: Liq.; 60% conc.

Rhodapex® N 70 [Rhodia HPCII]
Chem. Descrip.: Sodium laureth sulfate

Ionic Nature: Anionic
CAS 68585-34-2; EINECS/ELINCS 221-416-0
Uses: Foaming agent, detergent, emulsifier for
shampoos, cleansers, liq. soaps, bath gels, bubble
baths, hair prods.; high flash foam; rec. for light
color pastel so'ns; stable over wide pH range

Properties: Light paste; typ. odor, pH 8 (5%); 69%
min. act.

Environmental: Fully biodeg.

Rhodapex® NA 61 [Rhodia HPCII; Costec]
Chem. Descrip.: Sodium laureth (3) sulfate

Ionic Nature: Anionic
CAS 68585-34-2; EINECS/ELINCS 221-416-0
Uses: Emulsifier, high foaming base for dishwasher,
textile scours, canwashing compds.

Properties: Liq.; 60% conc.

Rhodapex® NA 61 CG [Rhodia HPCII]
Chem. Descrip.: Sodium laureth sulfate

Ionic Nature: Anionic
CAS 9004-82-4; EINECS/ELINCS 221-416-0
Uses: Cosmetic grade surfactant featuring high
flash foam; used in shampoos, bubble baths,
body shampoos, hair prods.; rec. for light-colored
pastel so'ns; stable over wide pH range

Properties: Nearly colorless clear liq.; ethanolic
odor; visc. 100 cps; cloud pt. 7 C; pH 6.5-7.5
(5%); 58% act.

Environmental: Fully biodeg.

Rhodapon® BOS [Rhodia HPCII; Rhodia HPCII
France; Costec]
Chem. Descrip.: Sodium 2-ethylhexylsulfate

Ionic Nature: Anionic
CAS 126-92-1; EINECS/ELINCS 204-812-8
Uses: Wetting agent, emulsifier, detergent, foamer
with high electrolyte tolerance for industrial,
institutional and household cleaners; latex stabilizer,
nickel brightener, metal treatment; textile and
plywood mfg.; fruit and veg. washing

Regulatory: FDA compliance

Properties: Clear liq.; visc. 50 cps; cloud pt. < 10
C; pH 9.5-10.5 (10%); surf. tens. 33 dynes/cm
(@ CMC); 39-40% act.

Environmental: Biodeg.

Rhodapon® CAV [Rhodia HPCII; Costec]
Chem. Descrip.: Sodium isodecyl sulfate

Ionic Nature: Anionic